

ABSTRACT

This invention involves the formation of a self-supporting coil of flaccid product with a take-up spool having a unique composite mandrel. The mandrel of the take-up spool comprises at least two complimentary components, including an expandable mandrel and a tapered ring, each of which is attached to one of the flanges of spool at the hub of each flange. The expandable mandrel component of the composite mandrel consists essentially of a plurality of curvilinear sections arranged about a central axis so as to form a cylinder which can permanently affixed to one flange of the spool; and, a tapered ring that is releasably affixed to the other flange of said take-up spool. The relative diameter of each one of the expandable mandrel and the tapered ring permit insertion of the ring into the open end of the expandable mandrel, and thereby assembly and locking each of the components thereof into a unitary spool structure. The assembly of the components of the spool causes the tapered ring to exert radial forces upon the interior of the expandable mandrel, and thereby radial displacement of its curvilinear surface and an increase in its cross-sectional diameter of the expandable mandrel. The take-up spool of this invention is reusable and can be used to form a self-supporting coil of banded flaccid product.